

## AMENDMENTS TO THE CLAIMS

1-4. (Cancelled)

5. (New) A rolling angle control device for a remote-controlled two-wheeled vehicle, the remote-controlled two-wheeled vehicle having a vehicle main body, a steering shaft supported on a front section of the vehicle main body at a predetermined caster angle, a front fork supporting a front wheel and being pivotally rotatable around the steering shaft, a steering actuator for applying a rotational torque to the steering shaft or the front fork in either of a left direction or a right direction, a rear wheel disposed at a rear section of the vehicle main body and being rotationally drivable by a prime motor, a steering angle detection means for detecting at least whether a steering angle of the remote-controlled two-wheeled vehicle is to the left direction or the right direction, and a remote control receiver mounted on the vehicle main body, the rolling angle control device comprising:

    a rolling angle detection means for detecting the rolling angle of the vehicle main body, the rolling angle being the angle by which the two-wheeled vehicle deviates from vertical;

    a rolling angle control means for outputting an operation amount for the steering actuator based on the rolling angle detected by the rolling angle detection means and a rolling angle target value from the remote control receiver so as to bring the rolling angle closer to the rolling angle target value;

    a target value determination means for determining whether the rolling angle target value

received by the remote control receiver is  $0^\circ$ ; and

a caster effect control means for generating a signal for the steering actuator, the signal indicating that a right-rotational torque is to be applied to the steering shaft or the front fork via the steering actuator when the steering angle detected by the steering angle detection means is in the right direction, or indicating that a left-rotational torque is to be applied to the steering shaft or the front fork via the steering actuator when the steering angle detected by the steering angle detection means is in the left direction,

wherein the signal generated by the caster effect control means is added to the operation amount output by the rolling angle control means at least when the target value determination means determines that the rolling angle target value is  $0^\circ$ .

6. (New) A rolling angle control device for a remote-controlled two-wheeled vehicle, the remote-controlled two-wheeled vehicle having a vehicle main body, a steering shaft supported on a front section of the vehicle main body at a predetermined caster angle, a front fork supporting a front wheel and being pivotally rotatable around the steering shaft, a steering actuator for applying a rotational torque to the steering shaft or the front fork in either of a left direction or a right direction, a rear wheel disposed at a rear section of the vehicle main body and being rotationally drivable by a prime motor, a steering angle detector for detecting at least whether a steering angle of the remote-controlled two-wheeled vehicle is to the left direction or the right direction, and a remote control receiver mounted on the vehicle main body, the rolling angle control device comprising:

a rolling angle detector for detecting the rolling angle of the vehicle main body, the

rolling angle being the angle by which the two-wheeled vehicle deviates from vertical; and a controller for outputting an operation amount for the steering actuator based on the rolling angle detected by the rolling angle detector and a rolling angle target value from the remote control receiver so as to bring the rolling angle closer to the rolling angle target value, wherein the controller is configured to apply a signal to the operation amount for the steering actuator, the signal indicating that a right-rotational torque is to be applied to the steering shaft or the front fork via the steering actuator when the steering angle detected by the steering angle detector is in the right direction, or indicating that a left-rotational torque is to be applied to the steering shaft or the front fork via the steering actuator when the steering angle detected by the steering angle detector is in the left direction.